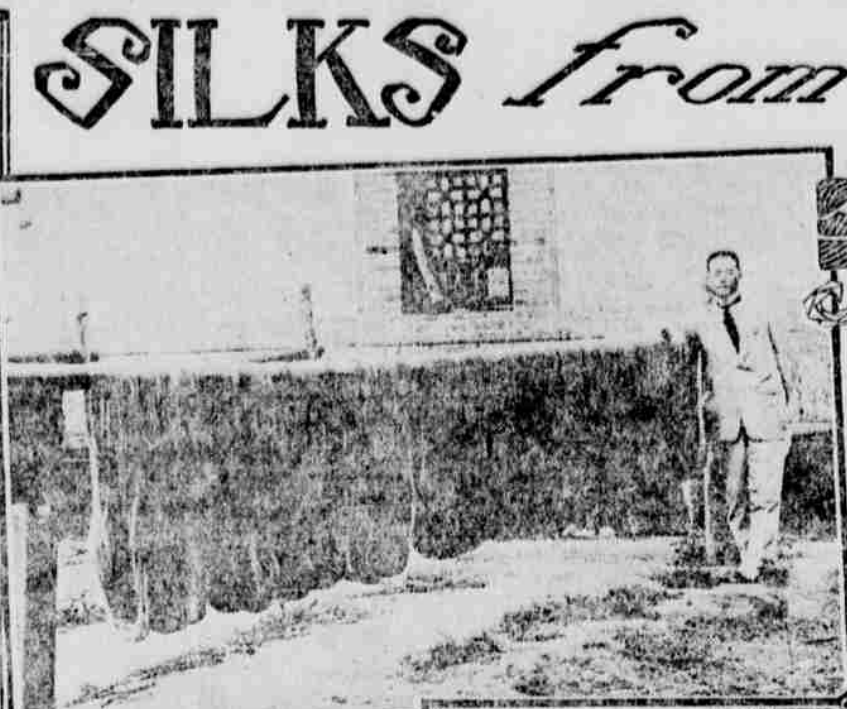


SILKS from SHANTUNG



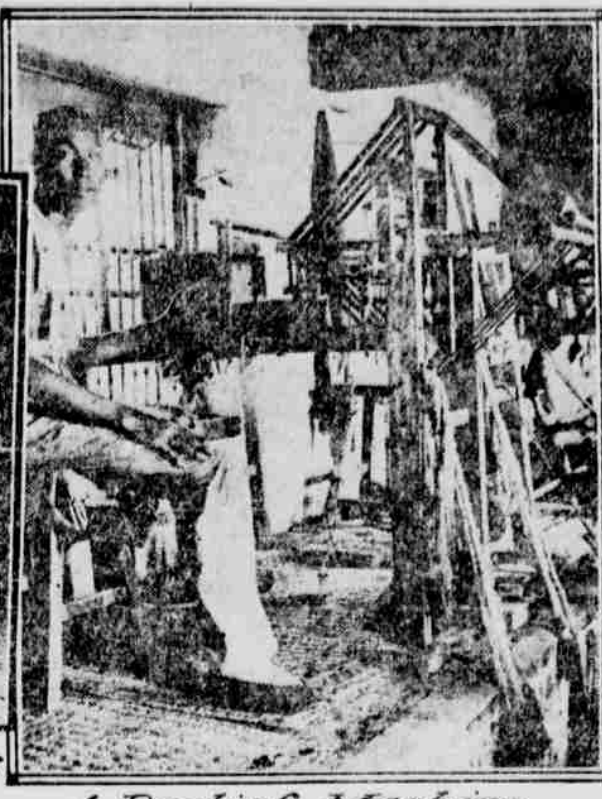
Weaving Dongees



Drying Silk on Ropes



Preparing the Warp for Weaving



A Reeling Machine

Silk Industry in Shantung Dates Back At Least 2500 Years—Worms Feed On Scrub Oak—Factory Conditions Far From Ideal.

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SHANTUNG? "Oh, yes; that's the place Japan wants to take from China." But it is famous for other reasons. It was the home, for instance, of the great philosopher, Confucius, greatest of Chinese sages. If Confucius were to return to earth today, after an absence of 2500 years, and walk through his native province, he would find many things still the same. This would be true of at least one industry which is a most important one in this densely populated territory, and which has been the principal occupation of hundreds of thousands of the people there, and the partial occupation of many others, for centuries.

This is the reeling and weaving of silks or Shantung. The same antiquated style of wheel is used for reeling the fibre; and the native farmers weave the pongees or Shantung in their cottages on hand looms like those they used in the days of the great philosopher.

Only a portion of the silk making of Shantung is a "cottage industry," although it would be well for the health of the operatives if more of the work were done in the homes instead of in overcrowded, poorly ventilated and ill-smelling factories.

Must Adopt Modern Methods But in the factory, as in the home, Confucius would note little change in methods of operation. Modern machinery, however, used during recent years in Japan in the manufacture of imitation pongees is a factor which Shantung's hand-workers in silk-making must consider in looking out for their future industrial welfare.

Where are the mulberry trees? Is a question which a stranger visiting Shantung for the first time and wondering about over a hillside, might ask. He had been told that many of the farmers raised cocoons as part of their agricultural activity; and in his mind the cultivation of cocoons had always been associated with mulberry leaves. But nothing answering that description was visible.

Oak Leaves Food For Silk Worms Instead the hillside was partly covered with scrub oaks. And there is his answer; for it is on the scrub oak, and not on the mulberry, that the silk worm in that part of China feeds. Sericulture is suffering because of the fact that the natives have been cutting down many of these trees for their domestic requirements. This condition probably would not exist if the few wealthy owners of the silk reeling establishments attempted to meet their own requirements for cocoons. Instead they depend for their supply, except what they import from Manchuria, on the natives scattered throughout the mountains. As a side issue these small farmers utilize the scrub oaks on that part of the farms not cleared for agricultural purposes, for the production of cocoons. The location of the trees makes a difference in the quality of the crop, both in color and quality of fibre. Trees on the southern sides of the hills produce cocoons which yield strong fibres of good lustre. Cocoons which have enjoyed less exposure to the sun yield a fluff fibre which is soft and lacks

strength. Several varieties of silk are made in Shantung; and there are differences in the operating method, also in the wages and conditions surrounding the workers. There are three kinds of pongees: Ninghai, Shantung and Nanshan. The Ninghai of high quality, both light and heavy weight, are made entirely of local silk; in the medium quality the warp is of Ninghai silk, the weft of Manchurian silk. Shantung are made of silk fibre from the Chantai district of Shantung, known as Nanshan silk, for the warp and Manchurian silk fibre for weft.

A "Cottage Industry" The making of the Shantung proper is what might properly be described as a "cottage industry," for it is carried on in the homes of the country people. Silk is distributed to them and they deliver to the owner the finished pieces. For each bundle of silk yarn weighing sixty Chinese ounces the home weaver must return two complete pieces of pongee silk. Each of these pieces is supposed to be from eighteen to twenty yards in length and from 33 to 34 inches in

width. As a matter of fact, however, the delivered product is usually a little under these figures, both as to length and width. The method by which these workers are paid is held to be accountable for this deficiency. They receive part of their payment in cash the rest in excess silk. They are paid 1,000 copper cash about sixty cents United States currency, for each piece; and in addition receive what silk is left after they have finished the piece.

These "cottage weavers" devote only a small part of their time to this work. Each family usually has one loom, and the farmer or some other member of the family works at it "between times." If he were to continue steadily at the loom he could turn out as many as eight pieces of Shantung a month. The average, however, is only two pieces a month.

As to what he does with the excess silk which he receives, the home weaver is practically uncontrolled. The result is that irregular sizes of pongees get on the market; and this irregularity of standard works to the harm of the trade. The weavers of Ninghai pongees, on the other hand, are paid by the piece, and do not receive excess silk, on which account

there is more uniformity in that variety.

In The Factories Working conditions in the city differ widely from those in the country, the latter being far superior to the former. In the silk factories in the cities the operatives put in long hours, but even more injurious to their health is the crowding into long narrow rooms where ventilation is not a matter that enters into the scheme of things. The life of an operative in one of these factories is short and tuberculosis is common. Skilled labor can be found, however, and at low wages, because of the density of the population in Shantung.

Winter and summer alike, work in these factories starts at 5 A. M., and continues, with the exception of fifteen minutes for the midday meal, until 5 o'clock at night. In other words, the worker there puts in fifteen hours and forty-five minutes at actual work; and he does this seven days a week. Probably that alone would be sufficient cause to insure a heavy death rate among this class of workers. They get their breakfast at 4.30 in the morning, and their supper after 9 P. M. Their noon meal consists of the dis-

carded chrysalis from the boiled cocoons, of which they are permitted to eat as much as they desire. The natives in that region, however, consider this a popular food; so this may not be as great a hardship as might be imagined.

The odor of steaming cocoons combines with those of kerosene lamps and of the human beings in these reeling establishments to make ventilation most desirable and most necessary; and yet practically no provision is made for this sanitary measure. A row of reeling tables is placed along each wall of the long, narrow, one-story building, with a narrow aisle between the tables. Under these conditions it is no wonder there is heavy mortality.

How Manufactured

In order to soften the sericin or silk gum and set free the fibre, the cocoons are immersed in boiling water, to which soda has been added, and allowed to steam in large cauldrons. After the cocoons are removed from the chrysalises, or pupae, which have been killed by the boiling water, they are placed upon a dry table and the fibre is then sufficiently free for reeling. Boxes containing about 500 cocoons each are supplied to the operators. One man can reel the contents of eight of these boxes in a day, and this will produce roughly 165,000 yards of 8-fibre silk.

For the purpose of purifying the silk and making the fibres adhere, after the reeling has been completed the fibre is steeped in boiling water in which soda beans have been boiled. An excess of soda bean will increase the weight of the finished pongee, and consequently its price, as weight is a factor in determining price; but the real value of the silk is decreased by this "loading" with soda bean. The weaving looms of Shantung are on the principle of the ordinary hand

loom of western countries. Practically all of them are built to be operated by one man. It is necessary at times to use a specially constructed loom to make pieces of silk wider than the usual size, which is from thirty-three to thirty-four inches. The two-man loom is seldom satisfactory, however, for the shuttles are not thrown with equal strength and the fabric is consequently not uniform.

The Worm And Cocoon

Cocoons are gathered in June and September. The Spring Crop is smaller but of better quality than the Autumn Crop. The Autumn Crop, for one thing, is darker in color. After the cocoon opens in April, the moth, or imago, requires four or five days to spread and dry its wings and reach its full development. During this period it does not eat, as its mouth is atrophied. It then mates, and the male dies immediately after this period. The female begins depositing eggs on the leaves of the scrub oak one day after mating and within a week dies. These eggs hatch in about two days, although cold weather may retard them up to five days. The worms begin at once to feed on the oak leaves. This they continue for seventy to ninety days.

Owing to their voracity and the fact that they grow so rapidly during this period, the worms shed their skins every two or three weeks. Thus they back out of their old skins four times. After having reached full growth the worm chooses a twig and begins to weave its cocoon.

On the first day an irregular web, which later serves to hold the cocoon in place, is woven. Then begins the spinning of the cocoon proper, the process all told consuming about 5 weeks. Thunder or any other unusual disturbance during this period will cause the worm to cease spinning after which it dies.

Among the MOVIE STARS



Marie Mosquini

A Star from Sweden—The Thirteenth Bride—An Italian Star—Love, Honor and Obey—The Marriage Pit—Takes Aristocratic Paris—Began As School Teacher.

PERHAPS the most striking thing about Anna Q. Nilsson aside from her personal charm and beauty is her individuality. She is absolutely no desire to form her own company; is the only Swedish actress to reach stellar heights in this country; has a middle name that sounds like a Sam Lloyd puzzle—Gwendolyn (take it home and try it on your vocal chords); and just but not least, in "In the Heart of a Fool," she appears as the only blond vampire in captivity. She expects to sail shortly for Sweden where she will act in a series of pictures depicting life in the land of the Midnight Sun.

The Thirteenth Bride The Thirteenth Bride in the clutches of the pirates, Ruth Storow (Marjorie Clayton), kidnapped in her wedding dress, is taken aboard the submarine. The Mahdi, chief of the pirate gang, is shown at her left (with Sati) and Sari, the female member of the desperadoes, is at extreme left. The story details the adventures of American brides who have been captured by pirates and held for ransom. In many of the scenes the U. S. Navy took active part.

Frank Mayo Frank Mayo has just finished "The Marriage Pit," a thrilling story of New York's smart set based on Frederick



Anna Q. Nilsson



The Thirteenth Bride in the Clutches of the Pirates

Isham's novel "Black Friday."

The character of Richard Strong is particularly suited to Mayo. He impersonates a virile self-made man who power on Wall Street. After marrying the daughter of one of the old Knickerbocker families he finds she does

not understand him, and a dancer from the Follies comes into his life with her unprincipled husband to make further trouble. How he wins out in the end and saves both his fortune and his home makes a story which will appeal both to men and to women.

A notable fact about the cast is that nearly every member of it has been well known on the speaking stage. Frank Mayo comes from a long line of actors, appearing on the stage when he was four, and made a success before he was twenty. Ray Ripley and Frederick Vroom have



Lois Wilson



Charles Lane

Frank Mayo



Wilda Bennett and Kenneth Harlan in Love, Honor and Obey

quite content with comedy roles.

Wilda Bennett And Kenneth Harlan

Wilda Bennett, late prima donna of the musical play, "Apple Blossoms," and Kenneth Harlan, in a charming love scene from "Love, Honor and Obey." The picture was adapted by Eugene Walter from Charles Neville Buck's novel, "The Tyranny of Weakness." It tells the engrossing story of a young author who falls in love with a New England girl and is then forbidden by her Puritanical father to see her, due to his having written a book containing advanced views on the subject of sex.

Lois Wilson

Miss Lois Wilson, who is a Birmingham, Ala., girl, began her career as a school teacher. She has been seen as leading woman for many stars, among them Wallace Reid and Bryant Washburn, and soon will be seen in the leading feminine role in the screen version of S. J. M. Barlett's "What's Every Woman Knows," a part created on the American stage by Maude Adams.

Charles Lane

If you speak with a motion picture director about his casting troubles, you will soon learn that the roles of the leading man and the leading woman are the easiest to fill; it is the character parts that present a hard problem, especially when they represent well-to-do men or women who must look as though they "belonged." That is where Charles Lane fits prominently, and therein lies the explanation of his screen success.

Known as one of the leading actors on the legitimate stage—he was recently seen with William Gillette in "A Successful Calamity," and with John Dean in "The Law of the Land"—Lane long refused to enter the film world, but finally succumbed. Two of his latest films are "Dr. Jekyll and Mr. Hyde," and "Away Goes Prudence." He has just finished filming "Three Women Loved Him," in which he plays one of the most important parts in the story.